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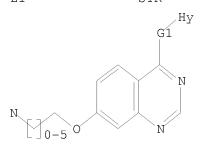
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L4 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2007:538808 CAPLUS

DOCUMENT NUMBER: 146:501078

TITLE: Preparation of 6-amino-4-(phenylamino)quinazoline

derivatives as tyrosine kinase inhibitors

INVENTOR(S): Ahn, Young-Gil; Kim, Jong Woo; Bang, Keuk Chan; Park, Bum Woo; Kim, Se Young; Lee, Kyungik; Lee, Kyuhang;

Ko, Myoung-Sil; Kim, Han Kyong; Kim, Young Hoon; Kim,

Maeng Sup; Lee, Gwan Sun

PATENT ASSIGNEE(S): Hanmi Pharm. Co., Ltd., S. Korea

SOURCE: PCT Int. Appl., 217pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATEN			KIN	D	DATE		1	APPL	ICAT	ION 1	DATE						
WO 2007055514					 A1	_	2007	0518		 WO 2	 006-:		20061108				
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	(GM,	KE,	LS,	MW,	MZ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	AM,	ΑZ,	BY,
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KR 2007049572 A 20070511 KR 2006-109137 20061106 KR 832594 B1 20080527

PRIORITY APPLN. INFO.: KR 2005-106506 A 20051108 KR 2006-109137 A 20061106

OTHER SOURCE(S): MARPAT 146:501078

GΙ

The title compds. [I; R1-R5 = independently H, HO, halogen, CF3, C1-6 AB alkyl, C1-6 alkoxy, C3-7 cycloalkyl, hydroxy-C1-5 alkyl, C1-6 alkoxy-C1-6 alkyl, NH2, amino-C1-4 alkyl, C1-6 alkylamino, C1-6 alkoxycarbonyl, C1-6 alkoxyaminocarbonyl, aryl-C1-6 alkoxy, heteroaryl-C1-6 alkoxy, or aryl; R6 = H, C1-6 alkyl or di(C1-6 alkyl)amino-C1-6 alkyl; X = (un)substituted C2-6 alkenylcarbonyl or C2-6 alkynylcarbonyl; Z = (un) substituted C1-6alkoxy, C1-6 alkenyloxy, aryloxy, heterocyclyloxy, or heterocyclyl-C1-6 alkoxy] or pharmaceutically acceptable salts thereof are prepared These inventive quinazoline derivs. as multiplex inhibitors can selectively and effectively inhibit diseases caused by the overactivity of a tyrosine kinase, in particular a vascular endothelial growth factor receptor (VEGFR) or an epithelial cell growth factor receptor (EGFR). The diseases include cancer, diabetes, psoriasis, rheumatoid arthritis, Kaposi's sarcoma, angioma, acute and chronic nephropathy, arterial restenosis, autoimmune disease, acute infection, and eye disease caused by vein abruption. These compds. effectively inhibited the growth of A431 having overexpressed EGFR1 (HER-1) and SK-Br3 having overexpressed EGFR2 (HER-2) at a low drug concentration, while the compds. did not inhibit the growth of SW-620 not having overexpressed EGFR and EGFR2. They also showed an excellent inhibitory effect on VEGFR-2 (KDR), which is an importance factor for inducing angiogenesis. Thus, amidation of 4-[6-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-amino-4-(4-aminobromo-2-fluorophenylamino)quinazolin-7-yloxymethyl]piperidine-1-carboxylic acid tert-Bu ester by acryloyl chloride in CH2C12 at room temperature for 2 h gave 4-[6-acryloylamino-4-(4-bromo-2-fluorophenylamino)quinazolin-7yloxymethyl]piperidine-1-carboxylic acid tert-Bu ester which was deprotected by treatment with CF3CO2H in CH2C12 and acetylated by acetyl chloride in CH2Cl2 at room temperature for 2 h to give

N-[7-(1-acetylpiperidin-4-

ylmethoxy)-4-(4-bromo-2-fluorophenylamino)quinazolin-6-yl]acrylamide (II). II showed IC50 of 0.085, 0.048, 0.283, and 3.058 μ M against HUVEC, A431, SKBr3, and SW-620 cancer cell lines, resp., and 0.131 and 0.003 μ M against VEGFR-2 (KDR) and EGFR-1 (HER-1), resp.

IT 936558-91-7P, [2-[[4-[(6-Chloropyridin-3-y1)amino]-6-nitroquinazolin-7-y1]oxy]ethyl]carbamic acid tert-butyl ester 936558-92-8P, [7-(2-Aminoethoxy)-6-nitroquinazolin-4-y1](6-chloropyridin-3-y1)amine 936558-93-9P, N-[2-[[4-[(6-

Chloropyridin-3-yl)amino]-6-nitroquinazolin-7-yl]oxy]ethyl]acetamide 936558-94-0P, N-[2-[[6-Amino-4-[(6-chloropyridin-3-yl)amino]quinazolin-7-yl]oxy]ethyl]acetamide

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; preparation of 6-amino-4-(phenylamino)quinazoline derivs. as tyrosine kinase inhibitors)

RN 936558-91-7 CAPLUS

CN Carbamic acid, N-[2-[[4-[(6-chloro-3-pyridinyl)amino]-6-nitro-7-quinazolinyl]oxy]ethyl]-, 1,1-dimethylethyl ester (CA INDEX NAME)

RN 936558-92-8 CAPLUS

CN 4-Quinazolinamine, 7-(2-aminoethoxy)-N-(6-chloro-3-pyridinyl)-6-nitro-(CA INDEX NAME)

RN 936558-93-9 CAPLUS

CN Acetamide, N-[2-[[4-[(6-chloro-3-pyridinyl)amino]-6-nitro-7-quinazolinyl]oxy]ethyl]- (CA INDEX NAME)

RN 936558-94-0 CAPLUS

CN Acetamide, N-[2-[[6-amino-4-[(6-chloro-3-pyridinyl)amino]-7-quinazolinyl]oxy]ethyl]- (CA INDEX NAME)

IT 936558-89-3P, N-[7-(2-Acetylaminoethoxy)-4-[(6-chloropyridin-3-yl)amino]quinazolin-6-yl]acrylamide

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of 6-amino-4-(phenylamino)quinazoline derivs. as tyrosine kinase inhibitors)

RN 936558-89-3 CAPLUS

CN 2-Propenamide, N-[7-[2-(acetylamino)ethoxy]-4-[(6-chloro-3-pyridinyl)amino]-6-quinazolinyl]- (CA INDEX NAME)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 2 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:566625 CAPLUS

DOCUMENT NUMBER: 141:123758

Preparation of phosphonooxy quinazoline derivatives as TITLE:

therapeutic agents

INVENTOR(S): Mortlock, Andrew Austen

PATENT ASSIGNEE(S): Astrazeneca Ab, Swed.; Astrazeneca Uk Limited

SOURCE: PCT Int. Appl., 97 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent English LANGUAGE:

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PA.	FENT	NO.			KIND DATE					ION :								
WO	WO 2004058782						A1 2004071											
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EP	EP 1575966				A1 20050921					EP 2	003-	7895	62	20031222				
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		ΙE,	SI,	LT,	LV,	FΙ,	RO,	MK,	CY,	AL,	TR,	BG,	CZ,	EE,	HU,	SK		
JP	JP 2006512387						2006	0413	1	JP 2	004-	5633	55	20031222				
US	US 20060058325						2006	0316		US 2	005-	5394	83	20050617				
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THER SO	IER SOURCE(S):					MARPAT 141:123758												

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RN

$$\begin{bmatrix} R^3 \\ X \\ N \\ N \end{bmatrix}$$

Ι

Preparation of phosphonooxy quinazoline derivs. I (A = 6-membered heteroaryl AΒ containing nitrogen atom and optionally containing one or two further nitrogen atoms; X = 0, S(0), S(0)2, organoamino; m = 0-4; Y = 0, carbonylamido, etc.; Z = organoamino, phosphonooxy, C3-6 (un)substituted phosphonooxy cycloalkyl, etc.; R3 = H, halo, cyano, nitro, C1-6 alkoxy, C1-6 alkyl, carbonylamido, sulfonylamido, organoamino, etc.; R4 = H, C1-4 alkyl, heteroaryl, heteroaryl C1-4 alkyl, aryl, aryl C1-4 alkyl, halo Me Et, cyclopropyl, ethynyl substituted alkyl, etc.), compns. containing them, processes for their preparation and their use in therapy, is described. reaction of N-{6-[(3-chlorobenzyl)oxy]pyridin-3-yl}-7-(3-chloropropoxy)-6methoxyquinazolin-4-amine (preparation given) with 3-amino-3-methylbutanol in di-Me acetamide in the presence of KI gave 75% $3-[(3-\{[4-(\{6-[(3$ chlorobenzyl)oxy]pyridin-3-yl}amino)-6-methoxyquinazolin-7yl]oxy}propyl)amino]-3-methylbutan-1-ol which on treatment with di-tert-butyl-N, N-diethylphosphoramidite, oxidation with H2O2, and hydrolysis of the formed phosphate ester gave title compound, 3-[[3-[[4-[[6-[(3chlorobenzyl)oxy]pyridin-3-yl]amino]-6-methoxyquinazolin-7yl]oxy]propyl]amino]-3-methylbutyl dihydrogen phosphate.

IT 722485-20-3P 722485-21-4P 722485-22-5P 722485-26-9P 722485-27-0P 722485-30-5P 722485-32-7P 722485-34-9P 722485-36-1P 722485-37-2P 722485-39-4P 722485-46-3P 722485-48-5P 722485-71-4P 722485-75-8P 722485-83-8P 722486-37-5P 722486-28-4P 722486-37-5P 722486-43-3P 722486-52-4P 722486-59-1P 722486-65-9P 722486-85-3P 722486-93-3P

RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of phosphonooxy quinazoline derivs. as the rapeutic agents) $722485 - 20 - 3 \quad \text{CAPLUS}$

CN 1-Butanol, 3-[[3-[[4-[[6-[(3-chlorophenyl)methoxy]-3-pyridinyl]amino]-6-methoxy-7-quinazolinyl]oxy]propyl]amino]-3-methyl-, dihydrogen phosphate (ester) (9CI) (CA INDEX NAME)

RN 722485-21-4 CAPLUS
CN Benzamide, 3-chloro-N-[5-[[7-[3-[[1,1-dimethyl-3-(phosphonooxy)propyl]amino]propoxy]-6-methoxy-4-quinazolinyl]amino]-2-pyridinyl]- (CA INDEX NAME)

RN 722485-22-5 CAPLUS
CN Benzamide, 3-chloro-N-[5-[[7-[3-[ethyl[2-(phosphonooxy)ethyl]amino]propoxy]-6-methoxy-4-quinazolinyl]amino]-2-pyridinyl]- (CA INDEX NAME)

RN 722485-26-9 CAPLUS

CN Benzamide, N-[5-[[7-[3-[ethyl[2-(phosphonooxy)ethyl]amino]propoxy]-6-methoxy-4-quinazolinyl]amino]-2-pyridinyl]-3-fluoro- (CA INDEX NAME)

RN 722485-27-0 CAPLUS

CN Benzamide, 3,4-difluoro-N-[5-[[6-methoxy-7-[3-[(1-methylethyl)[2-(phosphonooxy)ethyl]amino]propoxy]-4-quinazolinyl]amino]-2-pyridinyl]-(CA INDEX NAME)

PAGE 2-A | F

RN 722485-32-7 CAPLUS

CN Benzamide, 3-chloro-N-[5-[[7-[[5-[ethyl[2-(phosphonooxy)ethyl]amino]pentyl]oxy]-6-methoxy-4-quinazolinyl]amino]-2-pyridinyl]- (CA INDEX NAME)

RN 722485-34-9 CAPLUS

CN Benzamide, $3-\text{chloro-N-}[5-[[7-[3-[\text{ethyl}[4-(\text{phosphonooxy})\text{butyl}]amino]propoxy}]-6-\text{methoxy-}4-\text{quinazolinyl}]amino]-2-pyridinyl]- (CA INDEX NAME)$

RN 722485-37-2 CAPLUS
CN Benzamide, 3-chloro-N-[5-[[6-methoxy-7-[3-[(2-methylpropy1)[2-(phosphonooxy)ethyl]amino]propoxy]-4-quinazolinyl]amino]-2-pyridinyl]-(CA INDEX NAME)

722485-39-4 CAPLUS RN

Benzamide, 3-chloro-N-[5-[[7-[3-[cyclopropy1[2-CN (phosphonooxy)ethyl]amino]propoxy]-6-methoxy-4-quinazolinyl]amino]-2pyridinyl] - (CA INDEX NAME)

RN

722485-46-3 CAPLUS Benzamide, 3-chloro-N-[5-[[7-[3-[cyclobuty1[2-CN (phosphonooxy)ethyl]amino]propoxy]-6-methoxy-4-quinazolinyl]amino]-2pyridinyl] - (CA INDEX NAME)

RN 722485-48-5 CAPLUS

CN Benzamide, 3-chloro-N-[5-[[6-methoxy-7-[3-[[2-(phosphonooxy)ethy1]-2-propyn-1-ylamino]propoxy]-4-quinazolinyl]amino]-2-pyridinyl]- (CA INDEX NAME)

RN 722485-71-4 CAPLUS

CN 1-Butanol, 3-[[3-[[4-[[6-[(3-chlorophenyl)methoxy]-3-pyridinyl]amino]-6-methoxy-7-quinazolinyl]oxy]propyl]amino]-3-methyl-, dihydrogen phosphate (ester), dihydrochloride (9CI) (CA INDEX NAME)

PAGE 2-A

•2 HCl

RN 722485-75-8 CAPLUS
CN Benzamide, 3-chloro-N-[5-[[7-[3-[[1,1-dimethyl-3-(phosphonooxy)propyl]amino]propoxy]-6-methoxy-4-quinazolinyl]amino]-2-pyridinyl]-, hydrochloride (1:3) (CA INDEX NAME)

PAGE 2-A

●3 HCl

RN 722485-83-8 CAPLUS

CN Benzamide, 3-chloro-N-[5-[[7-[3-[ethyl[2-(phosphonooxy)ethyl]amino]propoxy]-6-methoxy-4-quinazolinyl]amino]-2-pyridinyl]-, hydrochloride (1:3) (CA INDEX NAME)

PAGE 2-A

●3 HCl

RN 722485-97-4 CAPLUS

CN Benzamide, N-[5-[[7-[3-[ethyl[2-(phosphonooxy)ethyl]amino]propoxy]-6-methoxy-4-quinazolinyl]amino]-2-pyridinyl]-3-fluoro-, hydrochloride (1:3) (CA INDEX NAME)

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●3 HCl

RN 722486-05-7 CAPLUS

CN Benzamide, 3,4-difluoro-N-[5-[[6-methoxy-7-[3-[(1-methylethyl)]2-(phosphonoxy)ethyl]amino]propoxy]-4-quinazolinyl]amino]-2-pyridinyl]-, hydrochloride (1:2) (CA INDEX NAME)

PAGE 2-A | F

●2 HCl

RN 722486-28-4 CAPLUS

CN Benzamide, 3-chloro-N-[5-[[6-methoxy-7-[3-[methy1[2-(phosphonooxy)ethyl]amino]propoxy]-4-quinazolinyl]amino]-2-pyridinyl]-, hydrochloride (1:2) (CA INDEX NAME)

PAGE 2-A

•2 HCl

RN 722486-37-5 CAPLUS

CN Benzamide, 3-chloro-N-[5-[[7-[[5-[ethyl[2-(phosphonooxy)ethyl]amino]pentyl]oxy]-6-methoxy-4-quinazolinyl]amino]-2-pyridinyl]-, hydrochloride (1:2) (CA INDEX NAME)

PAGE 2-A

•2 HCl

RN 722486-43-3 CAPLUS

CN Benzamide, 3-chloro-N-[5-[[7-[3-[ethyl[4-(phosphonooxy)butyl]amino]propoxy]-6-methoxy-4-quinazolinyl]amino]-2-pyridinyl]-, hydrochloride (1:2) (CA INDEX NAME)

PAGE 2-A

•2 HCl

RN 722486-52-4 CAPLUS

CN Formic acid, compd. with 3-fluoro-N-[5-[[6-methoxy-7-[3-[methyl[2-(phosphonoxy)ethyl]amino]propoxy]-4-quinazolinyl]amino]-2-pyridinyl]benzamide (1:1) (CA INDEX NAME)

CM 1

CRN 722485-36-1 CMF C27 H30 F N6 O7 P

CM 2

CRN 64-18-6 CMF C H2 O2

O = CH - OH

RN 722486-59-1 CAPLUS

CN Benzamide, 3-chloro-N-[5-[[6-methoxy-7-[3-[(2-methylpropyl)]2-(phosphonoxy)ethyl]amino]propoxy]-4-quinazolinyl]amino]-2-pyridinyl]-, hydrochloride (1:2) (CA INDEX NAME)

PAGE 2-A

•2 HCl

RN 722486-93-3 CAPLUS

ΙT

CN Benzamide, 3-chloro-N-[5-[[6-methoxy-7-[3-[[2-(phosphonooxy)ethyl]-2-propyn-1-ylamino]propoxy]-4-quinazolinyl]amino]-2-pyridinyl]-, hydrochloride (1:2) (CA INDEX NAME)

RN 722485-67-8 CAPLUS
CN Phosphorous acid, 3-[[3-[[4-[[6-[(3-chlorophenyl)methoxy]-3-pyridinyl]amino]-6-methoxy-7-quinazolinyl]oxy]propyl]amino]-3-methylbutyl bis(1,1-dimethylethyl) ester (CA INDEX NAME)

RN 722485-69-0 CAPLUS

CN Phosphoric acid, 3-[[3-[[4-[[6-[(3-chlorophenyl)methoxy]-3-pyridinyl]amino]-6-methoxy-7-quinazolinyl]oxy]propyl]amino]-3-methylbutylbis(1,1-dimethylethyl) ester (CA INDEX NAME)

RN 722485-73-6 CAPLUS

CN Benzamide, 3-chloro-N-[5-[[7-[3-[(3-hydroxy-1,1-dimethylpropyl)amino]propoxy]-6-methoxy-4-quinazolinyl]amino]-2-pyridinyl]-(CA INDEX NAME)

RN 722485-81-6 CAPLUS

CN Benzamide, 3-chloro-N-[5-[[7-[3-[ethyl(2-hydroxyethyl)amino]propoxy]-6-methoxy-4-quinazolinyl]amino]-2-pyridinyl]- (CA INDEX NAME)

RN 722485-95-2 CAPLUS

CN Benzamide, N-[5-[[7-[3-[ethyl(2-hydroxyethyl)amino]propoxy]-6-methoxy-4-quinazolinyl]amino]-2-pyridinyl]-3-fluoro- (CA INDEX NAME)

RN 722486-03-5 CAPLUS

CN Benzamide, 3,4-difluoro-N-[5-[[7-[3-[(2-hydroxyethyl)(1-methylethyl)amino]propoxy]-6-methoxy-4-quinazolinyl]amino]-2-pyridinyl]-(CA INDEX NAME)

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RN 722486-24-0 CAPLUS

CN Benzamide, 3-chloro-N-[5-[[7-[3-[(2-hydroxyethyl)methylamino]propoxy]-6-methoxy-4-quinazolinyl]amino]-2-pyridinyl]- (CA INDEX NAME)

F

RN 722486-26-2 CAPLUS

CN Phosphoric acid, 2-[[3-[[4-[[6-[(3-chlorobenzoyl)amino]-3-pyridinyl]amino]-6-methoxy-7-quinazolinyl]oxy]propyl]methylamino]ethyl bis(1,1-dimethylethyl) ester (CA INDEX NAME)

RN 722486-35-3 CAPLUS

CN Benzamide, 3-chloro-N-[5-[[7-[[5-[ethyl(2-hydroxyethyl)amino]pentyl]oxy]-6-methoxy-4-quinazolinyl]amino]-2-pyridinyl]- (CA INDEX NAME)

$$\begin{array}{c} \text{Et} \\ \text{HO-CH}_2\text{-CH}_2\text{-N-} \text{(CH}_2)_5\text{-O} \\ \text{MeO} \\ \text{NH} \\ \text{NH} \\ \text{C-C} \\ \text{C1} \\ \end{array}$$

RN 722486-41-1 CAPLUS

CN Benzamide, 3-chloro-N-[5-[[7-[3-[ethyl(4-hydroxybutyl)amino]propoxy]-6-methoxy-4-quinazolinyl]amino]-2-pyridinyl]- (CA INDEX NAME)

RN 722486-46-6 CAPLUS

CN Benzamide, 3-chloro-N-[5-[[7-[3-[ethyl[4-(phosphonooxy)butyl]amino]propoxy]-6-methoxy-4-quinazolinyl]amino]-2-pyridinyl]-, 2,2,2-trifluoroacetate (1:2) (CA INDEX NAME)

CM 1

CRN 722485-34-9

CMF C30 H36 C1 N6 O7 P

CM 2

CRN 76-05-1 CMF C2 H F3 O2

RN 722486-49-9 CAPLUS

CN Benzamide, 3-fluoro-N-[5-[[7-[3-[(2-hydroxyethyl)methylamino]propoxy]-6-methoxy-4-quinazolinyl]amino]-2-pyridinyl]- (CA INDEX NAME)

RN 722486-55-7 CAPLUS

CN Benzamide, 3-chloro-N-[5-[[7-[3-[(2-hydroxyethyl)(2-methylpropyl)amino]propoxy]-6-methoxy-4-quinazolinyl]amino]-2-pyridinyl]-(CA INDEX NAME)

RN 722486-57-9 CAPLUS

CN Phosphoric acid, 2-[[3-[[4-[[6-[(3-chlorobenzoyl)amino]-3-pyridinyl]amino]-6-methoxy-7-quinazolinyl]oxy]propyl](2-methylpropyl)amino]ethylbis(1,1-dimethylethyl) ester (CA INDEX NAME)

PAGE 2-A

RN 722486-61-5 CAPLUS

CN Benzamide, 3-chloro-N-[5-[[7-[3-[cyclopropyl(2-hydroxyethyl)amino]propoxy]-6-methoxy-4-quinazolinyl]amino]-2-pyridinyl]- (CA INDEX NAME)

RN 722486-63-7 CAPLUS

CN Phosphoric acid, 2-[[3-[[4-[[6-[(3-chlorobenzoyl)amino]-3-pyridinyl]amino]-6-methoxy-7-quinazolinyl]oxy]propyl]cyclopropylamino]ethyl bis(1,1-dimethylethyl) ester (CA INDEX NAME)

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RN 722486-81-9 CAPLUS
CN Benzamide, 3-chloro-N-[5-[[7-[3-[cyclobutyl(2-hydroxyethyl)amino]propoxy]-6-methoxy-4-quinazolinyl]amino]-2-pyridinyl]- (CA INDEX NAME)

RN 722486-83-1 CAPLUS

CN Phosphoric acid, 2-[[3-[[4-[[6-[(3-chlorobenzoyl)amino]-3-pyridinyl]amino]-6-methoxy-7-quinazolinyl]oxy]propyl]cyclobutylamino]ethyl bis(1,1-dimethylethyl) ester (CA INDEX NAME)

RN 722486-89-7 CAPLUS

CN Benzamide, 3-chloro-N-[5-[[7-[3-[(2-hydroxyethyl)-2-propyn-1-ylamino]propoxy]-6-methoxy-4-quinazolinyl]amino]-2-pyridinyl]- (CA INDEX NAME)

$$\begin{array}{c} \text{HO-CH}_2\text{-CH}_2 \\ \text{HC} = \text{C-CH}_2\text{-N-(CH}_2)_3\text{-O} \\ \text{MeO} \end{array}$$

RN 722486-91-1 CAPLUS

CN Phosphoric acid, 2-[[3-[[4-[[6-[(3-chlorobenzoyl)amino]-3-pyridinyl]amino]-6-methoxy-7-quinazolinyl]oxy]propyl]-2-propyn-1-ylamino]ethyl bis(1,1-dimethylethyl) ester (CA INDEX NAME)

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ACCESSION NUMBER: 2001:228867 CAPLUS

134:266318 DOCUMENT NUMBER:

TITLE: Preparation of quinazolines as aurora 2 kinase

inhibitors

INVENTOR(S): Mortlock, Andrew Austen; Keen, Nicholas John Astrazeneca AB, Swed.; Astrazeneca UK Limited PATENT ASSIGNEE(S):

SOURCE: PCT Int. Appl., 208 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

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OTHER SOURCE(S): MARPAT 134:266318

GΙ

AB Title compds. (I) [wherein X = O, S, SO, SO2, NH, or NR6; R6 = H or alkyl; R5 = (un) substituted 6-membered aromatic ring containing at least one N; R1-R4

independently halo, CN, NO2, alkylsulfanyl, N(OH)R7, or R9X1; R7 = H or alkyl; X1 = a direct bond, O, CH2, OC(O), CO, S, SO, SO2, or (un)substituted NHCO, CONH, SO2NH, NHSO2, or NH; R9 = H or (un)substituted hydrocarbyl, heterocyclyl, or alkoxy; and at least one of R2 or R3 is other than H; or a salt, ester, amide, or prodrug thereof] were prepared as aurora 2 kinase inhibitors for the treatment of proliferative diseases, such as cancer. For example, 2-(N-benzoylamino)-5-aminopyrimidine and 4-chloro-6,7-dimethoxyquinazoline were coupled in i-PrOH to yield II (58%). The latter inhibited the serine/threonine kinase activity of aurora 2 kinase by 50% at a concentration of 0.00785 μM . In addition, II gave 50% inhibition of MCF-7 cell proliferation at 1.7 μM and reduced BrdU incorporation into cellular DNA by 50% at 1.92-2.848 μM .

IT 331805-82-4P 331805-87-9P 331805-92-6P 331806-40-7P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(target compds.; preparation of substituted quinazoline derivs. as inhibitors of aurora 2 kinase for the treatment of breast and colorectal cancers)

RN 331805-82-4 CAPLUS

CN 4-Quinazolinamine, N-[6-[(3-chlorophenyl)methoxy]-3-pyridinyl]-6-methoxy-7-[3-[[3-(4-morpholinyl)propyl]amino]propoxy]- (CA INDEX NAME)

RN 331805-87-9 CAPLUS

CN 1,3-Propanediamine, N3-[3-[[4-[[6-[(3-chlorophenyl)methoxy]-3-pyridinyl]amino]-6-methoxy-7-quinazolinyl]oxy]propyl]-N1,N1-dimethyl- (CA INDEX NAME)

RN 331805-92-6 CAPLUS

CN Ethanol, 2-[[3-[[4-[[6-[(3-chlorophenyl)methoxy]-3-pyridinyl]amino]-6-methoxy-7-quinazolinyl]oxy]propyl]methylamino]- (CA INDEX NAME)

RN

331806-40-7 CAPLUS 1-Propanol, 2-[[3-[[4-[[6-[(3-chlorophenyl)methoxy]-3-pyridinyl]amino]-6-CN methoxy-7-quinazolinyl]oxy]propyl]amino]-2-methyl- (CA INDEX NAME)

2

REFERENCE COUNT:

THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT (FILE 'HOME' ENTERED AT 17:16:46 ON 05 AUG 2008)

FILE 'REGISTRY' ENTERED AT 17:17:11 ON 05 AUG 2008

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L3 56 S L1 FULL

FILE 'CAPLUS' ENTERED AT 17:17:48 ON 05 AUG 2008

L4 3 S L3

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COST IN U.S. DOLLARS

SINCE FILE
ENTRY
SESSION
FULL ESTIMATED COST

16.83

195.40

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE TOTAL
ENTRY SESSION

CA SUBSCRIBER PRICE -2.40 -2.40

STN INTERNATIONAL LOGOFF AT 17:18:16 ON 05 AUG 2008